

### **AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

#### **LISTING OF CLAIMS**

1. (Currently amended) A caption overlaying method used on an interactive video equipment, in which information of a caption to be generated set by a user is received by a control layer, comprising:

A. providing a caption generating module, receiving the information of the caption from the control layer, and generating a caption image with a transparent background according to the information;

B. providing a caption overlaying module, overlaying the caption image on a digital service image, ~~to generate a mixed image with the caption, and obtaining a mingled the mixed image with the caption, encoding the mingled image, and transmitting the encoded mingled to at least one of display at a local side or transmit the mixed image which comprises the caption image and the digital service image as one object to a remote side.~~

2. (Previously presented) The caption overlaying method according to Claim 1, wherein the information of the caption to be generated comprises: internal codes of all characters of the caption, a position information of the caption, a size information of the caption and a color information of the caption.

3. (Previously presented) The caption overlaying method according to Claim 1, wherein the information of the caption to be generated comprises internal codes of all characters of the caption to be generated, and the internal code is generated with the steps of:

using a software for generating a character database; selecting a vector font; according to a required character size, displaying a character one by one on a PC screen with a software, and then recording the display result as a dot-matrix image, and storing the dot-matrix image in a specific format as a character database file.

4. (Previously presented) The caption overlaying method according to Claim 1, wherein the information of the caption to be generated comprises color information of the caption;

the caption generating module performs setting or changing the color of the characters according to the color information of the caption and keeping the background of the caption image transparent.

5. (Previously presented) The caption overlaying method according to Claim 1, in Step A comprising, after the caption generating module has received the caption information from the control layer, reading dot-matrix images of all the characters, and combining the dot-matrix images with the transparent background according to a display position and content of the caption selected at the control layer.

6. (Currently amended) The caption overlaying method according to Claim 1, further comprising, selecting to overlay the caption image at ~~[[the]]~~a local side or at ~~[[the]]~~a remote side by the control layer, and

for overlaying the caption image at the local side by the control layer, overlaying the caption image on the decoded image of locally received service and then outputting to the local side for display;

for overlaying the caption image at the remote side by the control layer, overlaying the caption image on the pre-encoded image of locally sent service to obtain the mingled image, encoding the mingled image, and then transmitting the encoded mingled ~~[[mixed]] image which comprises the caption image and the digital service image as one object to the remote side after encoding.~~

7. (Currently amended) An interactive video equipment that has a control layer to receive information of a caption to be generated set by a user, includes a caption generating module and a caption overlaying module;

wherein the caption generating module receives the information of the caption from the control layer, and generates a caption image with a transparent background according to the received information;

the caption overlaying module overlays the caption image on a digital service image, ~~to generate a mixed image with the caption, and obtains the mixed~~ a mingled image with caption to be encoded and transmitted ~~to at least one of display at a local~~

~~side or transmit the mixed image which comprises the caption image and the digital service image as one object to a remote side.~~

8. (Previously presented) The interactive video equipment according to Claim 7, the caption generating module reads dot-matrix images of all the characters, and combines the dot-matrix images with the transparent background according to a display position and content of the caption selected at the control layer after having received the caption information from the control layer.

9. (Previously presented) The interactive video equipment according to Claim 7, the caption overlaying module is in a CODEC (coder-decoder) unit and in front of an image CODEC module; the caption generating module is in the CODEC unit and connects with the caption overlaying module.

10. (Currently amended) The interactive video equipment according to Claim 7, the caption overlaying module further comprises a first caption overlaying module and a second caption overlaying module, and the caption generating module further comprises a first caption generating module and a second caption generating module; wherein

the first caption overlaying module is in an encoder, and locates along a service channel which is in front of an image-encoding module;

the first caption generating module is in the encoder and connects with the first caption overlaying module;

the second caption overlaying module is in a decoder, and locates along a service channel which is behind an image-decoding module;

the second caption generating module is in the decoder and connects with the second caption overlaying module.